8. Micha

Program Name: Micha.java **Input File: micha.dat**

Micha has noticed that some letter sequences like “ing” and “tion” among many other combinations seem to appear frequently in commonly used words. Such patterns can be used as clues for deciphering encrypted messages. However, trying to find the most common patterns can be a real challenge as she visually scans sentences. She would like a program that can flawlessly complete the task and help her gather data.

Micha will provide the text to be scanned along with a list of suspected common letter sequences. She would like to get a report showing the number of times specific sequences were found in the text. To make your task easier, all punctuation marks including hyphens and special characters have been eliminated and replaced by spaces if needed. There could be numbers in the text.

Input: The first line is a positive integer $S \leq 15$, the number of letter sequence for which to scan. That will then be followed by an unknown amount of text on an unknown number of lines which is to be scanned for each of the desired letter sequences. The data file will not exceed 100 lines and individual line length will not exceed 100 characters. Letter case is not considered significant, “ing” and “ING” are the same sequence.

Output: For each letter sequence provided, output the sequence surrounded by double quotation marks followed by a single space and the count of occurrences for that sequence.

Sample input:

```
3
ing
tion
ern
Micha has noticed that some letter sequences like ing and tion among many
other combinations seem to appear frequently in commonly used words Such
patterns can be used as clues for deciphering encrypted messages However
trying to find the most common patterns can be a real challenge as she
visually scans sentences She would like a program that can flawlessly
complete the task and help her gather data
```

Sample output:

```
"ing" 3
"tion" 2
"ern" 2
```